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FOREST RESEARCH NOTES

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TREES IN THE EDDY ARBORETUM,[1/]

Institute of Forest Genetics, Placerville, California

By

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This list of trees in the Eddy Arboretum has been prepared to meet the requests of visitors and correspondents. It includes species, varieties, and hybrids, their scientific and common names, their native ranges, and the number of specimens.

In addition to a small number of miscellaneous trees, the Eddy Arboretum contains what is probably the most complete collection of pines to be found anywhere. The arboretum and its contiguous test plantations provide a study area for pine-breeding research of the Institute of Forest Genetics. Some 10,000 planted trees occupy 40 acres. Arboretum trees, mostly 18 to 20 years old in 1947, are between 30 and 70 feet tall. The hybrids and progeny test trees are younger. There are 70 species, 22 varieties, and 26 hybrids of the genus *Pinus*. Since research is restricted to pines, there has been no systematic planting of other conifers.

Deep clay-loam soil and mild climate combine to permit growing the wide range of pine species. The arboretum, at 2,700 feet elevation, is well above the hot central valley of California, but below the colder zones of the Sierra Nevada. Precipitation is 42 inches, all of which falls from October to May. Maximum temperatures rarely exceed 100 deg. F. Winter minimums are usually near 20 deg. F., but 12 degrees was recorded in 1937 and 16 degrees in 1932. Light winter snowfall usually melts in less than a week; one unusual storm in 22 years deposited 36 inches of snow, another deposited 16 inches.

1/ Named in honor of James G. Eddy, who founded the Institute of Forest Genetics in 1925.

Pines cultured in the Eddy Arboretum, 1947

Scientific and common name	Native range	Number of trees
Pinus:		
albicaulis Engelm. whitebark pine	W. North America	1
aristata Engelm. bristlecone pine	S. W. United States	1
arizonica Engelm. Arizona pine	Arizona	20
Armandi Franch. Armand pine	China	4
attenuata Lemm. knobcone pine	California	61
ayacahuite Ehren. Mexican white pine	Mexico	4
Balfouriana Grev. & Balf. foxtail pine	California	2
Banksiana Lamb. jack pine	E. North America	16
Bungeana Zucc. lacebark pine	China	6
canariensis C. Smith Canary Island pine	Canary Islands	29
caribaea Morelet slash pine	Gulf of Mexico Region	92
cembra L. Swiss stone pine	Cen. Europe to N. Asia	2/ 9
cembroides Zucc. Mexican pinyon	Mexico	7
clausa (Engelm.) Vasey sand pine	S. E. United States	4
contorta Dougl. shore pine	W. North America	4
contorta var. *latifolia* Engelm. lodgepole pine	W. North America	52
contorta var. *Bolanderi* Vasey Bolander pine	W. North America	4
Coulteri D. Don Coulter pine	California	84
densiflora Sieb. & Zucc. Japanese red pine	Japan	31
durangensis Martinez Durango pine	Mexico	2
echinata Mill. shortleaf pine	S. E. United States	181
edulis Engelm. pinyon	S. W. United States	5

2/ These trees are in propagation in gallon cans.

Pines cultured in the Eddy Arboretum, 1947—*continued*

Scientific and common name	Native range	Number of trees
excelsa Wall. Himalayan pine	India	6
flexilis James limber pine	W. North America	7
Gerardiana Wall. Gerard pine	India	4
glabra Walt. spruce pine	S. E. United States	13
Greggii Engelm. Gregg pine	Mexico	8
halepensis Mill. Aleppo pine	Mediterranean Region	26
halepensis var. *brutia* Elw. & Henry erect cone Aleppo pine	Mediterranean Region	5
insularis Endl. Luzon pine	Burma to Philippines	1
Jeffreyi Grev. and Balf. Jeffrey pine	California	373
koraiensis Sieb. and Zucc. Korean pine	N. E. Asia	1
Lambertiana Dougl. sugar pine	California	184
latifolia Sarg. Apache pine	Arizona and N. Mexico	15
leiophylla Schl. and Cham. smoothleaf pine	Mexico	36
leucodermis Antoine graybark pine	Balkan Mts.	8
longifolia Roxburgh chir pine	India	27
luchuensis Mayr Luchu pine	Ryukyu Islands 3/	10
Lumholtzii Rob. and Fern. Lumholtz pine	Mexico	1
Massoniana Lamb. Masson pine	China	9
monophylla Torr. & Frem. singleleaf pinyon	S. W. United States	3
montana Mill Swiss mountain pine	Central Europe	15
montana var. *Mughus* Willk. Mugho pine	Central Europe	12
montana var. *pumilio* Willk. shrubby Swiss pine	Central Europe	2
montana var. *uncinata* Willk. tree Swiss pine	Central Europe	10
montana var. *gallica* French mountain pine	Central Europe	3

3/ Identity of these trees is in doubt. Fifteen Luchu pines from seed collected on Okinawa Island in 1945 are now in propagation in gallon cans.

Pines cultured in the Eddy Arboretum, 1947—*continued*

Scientific and common name	Native range	Number of trees
Montezumae Lamb. Montezuma pine	Mexico	40
Montezumae var. *Hartwegii* Engelm. Montezuma pine	Mexico	18
Montezumae var. *rudis* Shaw Montezuma pine	Mexico	2
monticola Dougl. western white pine	W. North America	74
muricata D. Don Bishop pine	California	23
Nelsonii Shaw Nelson pine	Mexico	4/ 2
nigra var. *austriaca* Asch. & Graeb. Austrian pine	Mediterranean Region	20
nigra var. *calabrica* Schneid. Corsican pine	Mediterranean Region	29
nigra var. *cebennensis* Rehder Cevennes pine	Mediterranean Region	4
nigra var. *mauretanica* Mair & Peyer Algerian pine	Mediterranean Region	6
nigra var. *pallasiana* Asch. & Graeb. Crimean pine	Mediterranean Region	4
oocarpa Schiede eggcone pine	Mexico	13
palustris Mill. longleaf pine	S. E. United States	79
patula Schl. and Cham. Mexican weeping pine	Mexico	26
puece Griseb. Macedonian pine	Balkan Mts.	2
pinaster Ait. maritime pine	Mediterranean Region	20
pinaster var. *gigantea* maritime pine	Mediterranean Region	7
pinaster var. *hamiltonii* Gord. maritime pine	Mediterranean Region	4
Pinceana Gord. Pinceana pine	Mexico	1
pinea L. Italian stone pine	Mediterranean Region	13
ponderosa Laws. 5/ ponderosa pine	W. North America	980
ponderosa var. *scopulorum* Engelm. Rocky Mountain ponderosa pine	Rocky Mountains	238
pseudostrobus Lindl. Nicaragua pine	Mexico to Nicaragua	7
pungens Lamb. Table Mountain pine	E. United States	18
quadrifolia Parl. Parry pinyon	California	7

4/ These trees are in propagation in gallon cans.

5/ The ponderosa trees include representatives from more than 50 sources from British Columbia to Mexico and from South Dakota to the Pacific Coast.

Pines cultured in the Eddy Arboretum, 1947—*continued*

Scientific and common name	Native range	Number of trees
radiata D. Don Monterey pine	California	254
radiata var. *binata* Lemm. Monterey pine	California	2
remorata Mason Santa Cruz pine	California	15
resinosa Ait. red pine	E. North America	17
rigida Mill. pitch pine	E. North America	66
rigida var. *serotina* (Michz.) Loud. pond pine	S. E. United States	12
Sabiniana Dougl. Digger pine	California	17
strobus L. eastern white pine	E. North America	52
sylvestris L. Scotch pine	North Europe and Asia	61
sylvestris var. *argentea* Steven silver Scotch pine	Caucasus Mountains	4
sylvestris var. *lapponica* Fries Lapland pine	Scandinavia	3
sylvestris var. *rigensis* Loud. Riga pine	Baltic Region	10
sylvestris var. *scotia* Peiss. Highlands pine	Scotland	6/ 22
tabulaeformis Carr. (*sinensis* Mayr) Chinese pine	China	26
taeda L. loblolly pine	S. E. United States	144
taiwanensis Hayata Formosa pine	Formosa	8
teocote Schl. and Cham. Aztec pine	Mexico	1
Thunbergii Parl. Japanese black pine	Japan	10
Torreyana Parry Torrey pine	California	24
virginiana Mill. Virginia pine	S. E. United States	3
washoensis Mason & Stockwell Washoe pine	Nevada	9
yunnanensis Franch. Yunnan pine	China	7

6/ These trees are in propagation in gallon cans.

Hybrids cultured in the Eddy Arboretum, 1947/

Scientific name	Age of trees	Number of trees
	Years	
Pinus:		
x attenuradiata Stockwell and Righter (*attenuata x radiata*)	18	28
attenuata x (attenuata x radiata)	10	30
(attenuata x radiata) x (attenuata x radiata)	6-14	28
(attenuata x radiata) x attenuata	10	2
(attenuata x radiata) x radiata	10	2
arizonica x ponderosa	3	15
caribaea x taeda	10	3
contorta var. *latifolia x banksiana*	6	15
echinata x caribaea	14	7
echinata x rigida	18	22
echinata x taeda	5-8	86
Jeffreyi x Coulteri (natural hybrid)	5	55
Jeffreyi x (Jeffreyi x Coulteri)	6	105
Jeffreyi x ponderosa	14	8
monticola x excelsa	3-4	18
monticola x strobus	4-6	71
palustris x caribaea	12	18
ponderosa x Jeffreyi	14	1
ponderosa x latifolia	2-14	32
ponderosa x ponderosa var. *scopulorum*	3-18	120
rigida x taeda	2-12	16
x Sondereggeri H. H. Chapman (natural hybrid *taeda x palustris*)	14-20	111
strobus x excelsa	5	10
taeda x caribaea	12	8
taeda x palustris	18	2
washoensis x ponderosa	4	40

7/ These are all outplanted trees. The largest 18-year-old *attenuradiata* trees are 60 feet tall.

Scientific and common name	Native range
Abies concolor (Gord. & Glend.) Hoopes white fir	Western North America
Abies grandis (Dougl.) Lindl. grand fir	Western North America
Abies magnifica A. Murr. red fir	California and Oregon
Abies religiosa Schl. & Cham. sacred fir	Mexico and Guatemala
Abies bracteata (D. Don) Nutt. bristlecone fir	California
Cedrus deodara Loud. deodar cedar	Himalaya Mountains
Callitris cupressiformis[a/] Ventenat cypress pine	Australia
Cephalotaxus drupacea[a/] Sieb. & Zucc. Japanese plum yew	Japan
Chamaecyparis Lawsoniana (A. Murr.) Parl. Port Orford cedar	S. W. Oregon to N. W. California
Cryptomeria japonica D. Don cryptomeria	Japan
Cunninghamia lanceolata Hook. Chinese fir	China
X Cupressocyparis Leylandii Dallim. and Jacks. Leyland cypress (*Chamaecyparis nootkatensis x Cupressus macrocarpa*)	
Cupressus arizonica var. *bonita* Lemm. Arizona cypress	Arizona
Cupressus funebris[a/] Endl. mourning cypress	China
Cupressus Goveniana Gord. Gowen cypress	California
Cupressus guadalupensis S. Watson Guadalupe cypress	Mexico
Cupressus lusitanica Mill. Mexican cypress	Mexico and Guatemala
Cupressus macnabiana A. Murr. McNab cypress	Oregon and California
Cupressus nevadensis Abrams. Piute cypress	California
Cupressus sargentii Jeps. Sargent cypress	California
Cupressus sempervirens L. Italian cypress	Mediterranean Region
Ginkgo biloba Kaempfer Ginkgo	China
Juniperus cedrus Webb & Barth. Canary Island juniper	Canary Islands
Juniperus chinensis var. *japonica* Lav. Japanese juniper	Japan
Juniperus chinensis var. *pfitzeriana* Spaeth Pfitzer juniper	Horticultural variety
Juniperus horizontalis Moench. creeping juniper	Northern North America
Juniperus occidentalis Hook. western juniper	California to British Columbia
Juniperus sabina L. savin juniper	Europe
Juniperus scopulorum Sarg. Rocky Mountain juniper	Rocky Mountains

a/ These trees are in propagation in gallon cans.

Conifers and taxads other than pines, 1947--*continued*

Scientific and common name	Native range
Juniperus virginiana L. eastern red cedar	Eastern North America
Larix europaea De Candolle (*L. deciâua* Mill.) European larch	Europe and Siberia
Larix leptolepis Sieb. and Zucc. (*L. Kaempferi* Sarg.) Japanese larch	Japan
Libocedrus decurrens Torr. incense cedar	California and Oregon
Picea canadensis (Mill.) B.S.P. (*P. glauca* Voss) white spruce	Northern North America
Picea Engelmanni Parry Engelmann spruce	Western North America
Picea excelsa Link. (p. *abies* Karst.) Norway spruce	Northern Europe
Picea likiangensis Pritzel Likiang spruce	Western China
Picea mariana (Mill.) B.S.P. black spruce	Northern North America
Picea pungens Engelm. blue spruce	Colorado to Mexico
Picea purpurea Mast. (erroneously labeled *Picea Delavayi*) purple cone spruce	Western China
Picea sitchensis Carr. Sitka spruce	Northern California to Alaska
Podocarpus andina[9/] Poeppig podocarp	Chile
Podocarpus macrophylla[9/] D. Don podocarp	Japan
Pseudolarix amabilis[9/] Rehder golden larch	China
Pseudotsuga macrocarpa (Vasey) Mayr. bigcone spruce	Southern California
Pseudotsuga taxifolia (Poir.) Britton Douglas fir	British Columbia to Mexico
Pseudotsuga taxifolia var. *glauca* (Mayr) Sudw. Rocky Mountain Douglas fir	Rocky Mountains
Sequoia gigantea Decaisne giant Sequoia	California
Sequoia sempervirens Endl. redwood	California
Taxus brevifolia Nutt. Pacific yew	Western North America
Taxus baccata var. *fastigiata* Loud. Irish yew	Europe
Thuja occidentalis L. American arborvitae	Eastern North America
Thuja orientalis L. oriental arborvitae	Northeast China and Korea
Thuja plicata D. Don giant arborvitae	California to Alaska
Torreya californica Torr. California Torreya	California
Tsuga heterophylla (Raf.) Sarg. western hemlock	California to Alaska
Sciadopitys verticillata Sieb. and Zucc. umbrella pine	Japan

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9/ These trees are in propagation in gallon cans.